

Bomar[®] BR-5541M Difunctional Aliphatic Polyether Urethane Methacrylate

APPLICATIONS

- Plastic bonding adhesives
- Cure-in-place gaskets and sealants
- Flexible 3D printing resins

FEATURES

- High elongation
- Low modulus for soft resin applications
- Good surface cure

FEATURES

- Excellent elasticity/rebound
- Adhesion to a variety of substrates, mainly plastics but also glass and metal
- Improved tear strength

BR-5541M is a flexible polyether urethane methacrylate oligomer diluted in 20% IBOA with a low modulus, good adhesion to a variety of substrates, and excellent elasticity. The high molecular weight of the backbone structure offers improved elasticity and rebound versus similar high elongation materials. The low modulus of the material allows for a high degree of flexibility comparable to silicone-based materials such as BRS-14320S, but with improved compatibility and surface cure. The compressibility of the material also offers potential usage in gasket and sealing applications.

UNCURED PROPERTIES

Property	Value
Viscosity, cP (60°C)	24,000
Pt-Co (APHA) Color	19
Refractive Index (25°C)	1.470
Density, g/cm ³ (25°C)	1.000

CURED MECHANICAL PROPERTIES

Property	I30	I50	TM50	TP50	H50	HE30
Tensile Strength, psi**	440	2,300	2,800	1,600	2,200	1,000
Elongation, %**	270	400	4.0	15.7	10.3	400
Elastic Modulus, ksi**	0.43	5.4	100	40	50	0.79
Durometer	53A	30D	76D	59D	62D	71A
Water Absorption, % (24 hrs)	0.52	0.24	0.75	0.66	0.55	2.98
MEK Double Rubs (#)	60	19	>200	30	57	35
T _g (DMA) = -45°C; Peak tan delta; cured with 2 phr of Irgacure [®] 184						

** Per ASTM D882

ADHESION PROPERTIES

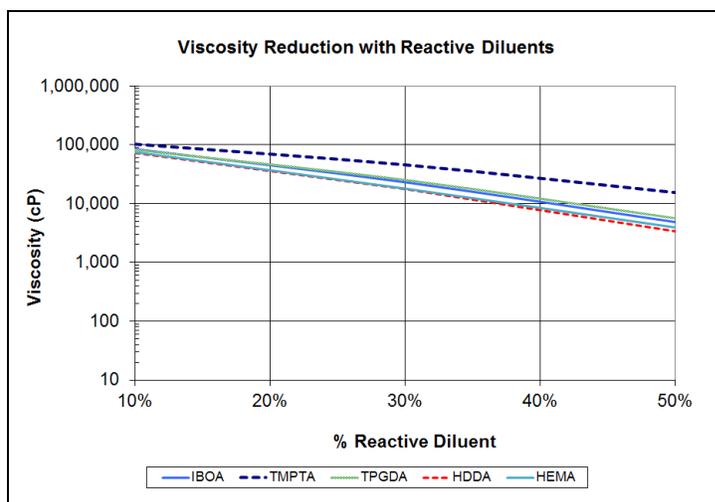
Substrate	I30	I50	TM50	TP50	H50	HE30
ABS		✓✓	✓✓✓	✓	✓	
Aluminum		✓✓				
Cold Rolled Steel		✓✓				
Glass		✓✓				
HDPE						
PET		✓✓	✓✓	✓✓	✓	
PMMA		✓✓				
Polycarbonate	✓	✓✓	✓✓✓	✓✓	✓✓✓	
Polypropylene						
PVC		✓✓	✓✓✓	✓	✓✓	
Stainless Steel		✓✓				

✓ Recommended ✓✓ Highly Recommended ✓✓✓ Strongly Recommended

TYPICAL FORMULATIONS

Test Formulation Name	I30	I50	TM50	TP50	H50	HE30
BR-5541M	70	50	50	50	50	70
IBOA	30	50				
TMPTA			50			
TPGDA				50		
HDDA					50	
HEMA						30
Irgacure [®] 184	2	2	2	2	2	2
Viscosity, 25°C *	23,000	4,800	15,000	5,600	3,400	18,000

* Brookfield – CAP 2000+ @ 25°C.



Brookfield – CAP 2000+ @ 25°C

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